ORDER NO. 87082

IN THE MATTER OF POTOMAC EDISON COMPANY D/B/A ALLEGHENY POWER'S ENERGY EFFICIENCY, CONSERVATION AND DEMAND RESPONSE PROGRAMS PURSUANT TO THE EMPOWER MARYLAND ENERGY EFFICIENCY ACT OF 2008	*	BEFORE THE PUBLIC SERVICE COMMISSION OF MARYLAND
IN THE MATTER OF BALTIMORE GAS AND ELECTRIC COMPANY'S ENERGY EFFICIENCY, CONSERVATION AND DEMAND RESPONSE PROGRAMS PURSUANT TO THE EMPOWER MARYLAND ENERGY EFFICIENCY ACT OF 2008	*	CASE NO. 9153
IN THE MATTER OF POTOMAC ELECTRIC POWER COMPANY'S ENERGY EFFICIENCY, CONSERVATION AND DEMAND RESPONSE PROGRAMS PURSUANT TO THE EMPOWER MARYLAND ENERGY EFFICIENCY ACT OF 2008	*	CASE NO. 9154
IN THE MATTER OF DELMARVA POWER & LIGHT COMPANY'S ENERGY EFFICIENCY, CONSERVATION AND DEMAND RESPONSE PROGRAMS PURSUANT TO THE EMPOWER MARYLAND ENERGY EFFICIENCY ACT OF 2008	*	CASE NO. 9155
IN THE MATTER OF SOUTHERN MARYLAND ELECTRIC COOPERATIVE, INC.'S ENERGY EFFICIENCY, CONSERVATION AND DEMAND RESPONSE PROGRAMS PURSUANT TO THE EMPOWER MARYLAND ENERGY EFFICIENCY ACT OF 2008	*	CASE NO. 9156
IN THE MATTER OF WASHINGTON GAS LIGHT COMPANY'S ENERGY EFFICIENCY, CONSERVATION AND DEMAND RESPONSE PROGRAMS PURSUANT TO THE EMPOWER MARYLAND ENERGY EFFICIENCY ACT OF 2008	*	CASE NO. 9157
	*	CASE NO. 9362

Issue Date: July 16, 2015

On February 12 and 13, 2015, the Public Service Commission of Maryland ("Commission") held a legislative-style hearing in the above-captioned cases to consider the topics of post-2015 energy efficiency goal allocations and future cost-effectiveness screening methodologies. The Commission received and reviewed comments filed by The Potomac Edison Company ("PE");[1] Baltimore Gas and Electric Company ("BGE");[2] Potomac Electric Power Company ("Pepco") and Delmarva Power & Light Company ("Delmarva");[3] Southern Maryland Electric Cooperative, Inc. ("SMECO");[4] and Washington Gas Light Company ("WGL")[5] (collectively, the "Utilities"). In accordance with the EmPOWER Maryland Energy Efficiency Act of 2008 ("EmPOWER"),[6] the Commission also reviewed the comments filed by its Technical Staff ("Staff");[7] the Office of People's Counsel ("OPC");[8] the Maryland Energy Administration ("MEA");[9] the Coalition of Maryland Energy Efficiency Advocates (the "Coalition");[10] and the Maryland Chapter of Efficiency First ("Efficiency First").[11]

[1] ML#163520: *The Potomac Edison Company Comments on Post-2015 Goal Allocation and Future Cost Effectiveness Assessment Methodologies* ("PE Comments") (Jan. 30, 2015).
[2] ML#163598: *Comments of Baltimore Gas and Electric Company* ("BGE Comments") (Jan. 30, 2015).
[3] ML#163542: *Delmarva Power & Light Company and Potomac Electric Power Company's Comments in response to Order No. 86785* ("PHI Comments") (Jan. 30, 2015).
[4] ML#163500: *Southern Maryland Electric Cooperative, Inc. Comments on Goals and Cost Effectiveness Calculation* ("SMECO Comments") (Jan. 29, 2015).
[5] ML#163607: *Comments of Washington Gas* ("WGL Comments") (Jan. 30, 2015).
[6] Public Utilities Article ("PUA") § 7-211.
[7] ML#163612: *Comments Regarding the Post-2015 Goal Allocation and Future Cost-Effectiveness Screening Methodologies for EmPOWER Maryland* ("Staff Comments") (Jan. 30, 2015).
[8] ML#163617: *Office of People's Counsel Comments on EmPOWER Maryland* ("OPC Comments") (Jan. 30, 2015).
[9] ML#157744: *EmPOWER 2015 – 2017 Cost Effectiveness Framework* ("MEA Framework Comments") (Aug. 19, 2014); ML#163513: *Maryland Energy Administration Comments regarding post-2015 goal allocation methodologies and future cost-effectiveness screening methodologies* ("MEA Comments") (Jan. 30, 2015).
[10] ML#163616: *Comments of the Maryland Energy Efficiency Advocates* ("Coalition Comments") (Jan. 30, 2015).
[11] ML#163376: *Comments on Cost Effectiveness and Goal Allocation* ("Efficiency First Comments") (Jan. 28, 2015).

In this Order we outline a framework for prospective cost-effectiveness screening and establish a methodology for determining post-2015 electric energy efficiency goals. We also provide a timeline and parameters for the development of robust natural gas energy efficiency goals and goals specific to the residential limited-income sector.

I. Future Cost-Effectiveness Screening

We have a statutory duty to require each gas and electric company to establish any program or service that the Commission deems appropriate and cost effective to encourage and promote the efficient use and conservation of energy.[12] We maintain an active role throughout program implementation, as the Commission is charged with monitoring and analyzing program impacts and outcomes using four statutory factors, including whether the program is cost effective.[13] As part of our ongoing review, should a program not yield "the best possible results," we may in turn direct the utility to remedy these findings.[14]

To date, our cost-effectiveness standard has focused on ensuring a real return on the ratepayers' investment. Based on evaluation, measurement, and verification ("EM&V") best practices, in 2009 we adopted an independent, third-party evaluator model to review the EmPOWER Maryland portfolio results.[15] Among other things, this process evaluates free-ridership, deemed savings calculations, spillover, cost-

[12] PUA § 7-211(f).
[13] PUA § 7-211(i)(1). The other three statutory factors include the impact on rates of each ratepayer class; the impact on jobs; and the impact on the environment. *Id.*
[14] PUA § 7-211(i)(2)-(3).
[15] Order No. 82869 (Aug. 31, 2009).

effectiveness, and other factors pertinent to a thorough and ongoing review of viable and cost-effective energy efficiency and demand response programs.

While the results of this thorough EM&V analysis frequently result in recommendations for future programmatic modifications, it is by definition a *retrospective* evaluation.[16] Today we provide direction regarding the scope and balancing of factors for purposes of *prospective* cost-effectiveness screening in order to provide transparency and foster innovation in the growing energy efficiency industry of Maryland.

A. Cost-Effectiveness Tests

Since the inception of the EmPOWER Maryland programs we have focused primarily on the Total Resource Cost ("TRC") test as the key predictor of cost effectiveness.[17] There are, however, four additional tests utilized to varying degrees to screen customer-facing energy efficiency programs: the Societal Cost test ("SCT"); the Ratepayer Impact Measure ("RIM") test; the Participant Cost test ("Participant"); and the Program Administrator Cost test ("PACT"). In the Northeast and Mid-Atlantic regions, the TRC, the SCT, and the PACT are the tests used most often; the TRC is the most widely used cost-effectiveness test nationwide.[18]

The Utilities, Staff, MEA, OPC, and other stakeholders advocated for a range of cost-effectiveness tests and combinations moving forward, although the parties' positions

[16] The verified savings resulting from this retrospective evaluation have been used to track progress toward the 2015 EmPOWER Maryland goals. Furthermore, it is standard practice for all EmPOWER Maryland program implementers to apply the calculated realization rates to reported savings on a prospective basis. This Order does not alter these long-standing practices, and to the extent that any party seeks to modify them, the proposal would require a Commission determination prior to enactment.
[17] Staff Comments at 20.
[18] Northeast Energy Efficiency Partnerships, *Cost-Effectiveness Screening Principles and Guidelines* (Nov. 2014) at 56, *available at:* http://www.neep.org/sites/default/files/resources/Forum_C-E_Screening_Guidelines_Final_No_2014.pdf.

generally focus on whether the TRC or the SCT should take precedence on a prospective basis.[19] Across the parties, the recommended choice of test ultimately depended on the Commission's decision regarding whether to account for non-energy benefits ("NEBs"). As asserted by the Coalition, "the test will be skewed against energy efficiency resources" if participant costs are included, but not the full complement of benefits that accrue to participants, such as limited-income arrearage relief and other NEBs.[20] OPC, Efficiency First, Delmarva, and Pepco also advocated for the inclusion of known and quantifiable NEBs in any primary cost-effectiveness assessment tool, with the PHI companies referring to the expanded test as the "TRC Hybrid."[21]

In reaching a determination regarding future cost-effectiveness screening methodologies, we note the prominence of the TRC as a cost-effectiveness screening tool nationwide, as well as its reputation as one of the most balanced and fair tests in terms of examining the inclusivity of costs and benefits.[22] For these reasons, coupled with our frequent reliance on comparisons to utility energy efficiency programs operated in other jurisdictions, we are reluctant to alter the inputs of the TRC to such a degree as to render comparisons to TRC results from other jurisdictions meaningless. As stated by BGE, the TRC "should maintain its integrity as a key cost-effectiveness screening measure considered in implementing energy efficiency programs."[23]

However, we are not persuaded that the TRC should remain as the *only* screening tool on a prospective basis; on the contrary, we concur with parties such as PE that note,

[19] The exception to this generalization is the position of PE; the company argued that the RIM and the TRC should be treated as equally valid primary assessment tests. PE Comments at 13.
[20] Coalition Comments at 4.
[21] PHI Comments at 4; OPC Comments at 5-6; Efficiency First Comments at 5.
[22] Staff Comments at 19.
[23] BGE Comments at 2.

"[t]he TRC test alone fails to consider the cost-effectiveness of investments from a non-participating ratepayer point of view."[24] Indeed, the Coalition contends that failing to account for "benefits that accrue to participants and non-participants alike, such as reduced air pollution and the corresponding reductions in adverse health effects" mischaracterizes the true cost-effectiveness of energy efficiency investments.[25] A failure on our part to consider a broader societal impact stemming from the implementation of energy efficiency programs would ignore the codified intent of the General Assembly "to provide affordable, reliable, and clean energy for consumers of Maryland."[26] This directive is not limited to only those consumers who participate in an energy efficiency program, just as the benefits of energy efficiency investments do not accrue only to direct program participants. We concur with MEA that the directive of the General Assembly to the Commission requires a societal viewpoint as the primary orienting framework,[27] and thus we direct the use of both the TRC *and* the SCT as assessment tools for purposes of conducting preliminary cost-effectiveness screening.[28]

We recognize that the use of two tests for assessment purposes could lead to some ambiguities in situations that generate positive results under one test only, just as we recognize that the use of two tests will likely expand the realm of potential cost-effective program offerings. We find, however, that the first situation is easily resolved and that

[24] PE Comments at 13. While PE asserts that the perceived shortcomings of the TRC can be overcome by coupling it with the RIM test, we find that the impact on rates for each ratepayer class is more properly accounted for as part of our "appropriate screen" described later in this section.
[25] Coalition Comments at 4.
[26] PUA § 7-211(b).
[27] MEA Comments at 9. As stated by MEA, the societal-based directive is reinforced multiple times in the statute because saving energy is good for society – including ratepayers, the economy, the electricity grid, the environment, and the utilities. *Id.*
[28] Even parties such as BGE and SMECO, who primarily advocated for retention of a "clean TRC", noted that the Commission should consider the SCT. *See* BGE Comments at 2-3; SMECO Comments at 2.

the second situation is in fact desirable. In the first instance, we note that during the EmPOWER Maryland Planning Work Group process the parties concluded that it would be feasible to screen programs from all five perspectives;[29] thus, restricting our directive to only two tests is feasible. Furthermore, since we concur with MEA that the societal viewpoint is the primary orienting framework intended by the General Assembly, a positive result from the SCT shall be recognized as a cost-effective outcome. The TRC, while also considered a primary assessment test, will function as a guidepost and comparative tool to other jurisdictions, as well as our own past programmatic performance.

We are cognizant of the concern raised by at least one utility that reliance on a societal viewpoint will expand the definition of cost effectiveness in a way that will greatly impact consumer rates;[30] however, we strongly disagree. By definition, a cost-effective program must yield benefits in excess of its costs.[31] Moreover, we are not bound to approve *any* cost-effective program or service that is proposed to us; rather, the authorizing statute grants the Commission discretion in determining what we consider to be "appropriate" in light of certain statutory factors.[32] *In addition to* considering whether the program is cost effective, we must also consider the program's impact on rates of each ratepayer class, its impact on jobs, and its impact on the environment.[33] If we find a program to be appropriate after fully considering these four factors, only then will we

[29] MEA Framework Comments at 6.
[30] PE Comments at 13.
[31] MEA Comments at 10.
[32] PUA § 7-211(f).
[33] PUA § 7-211(i)(1)(i) – (iv).

authorize its implementation.[34] Therefore, we find that conflating a program's impact on consumer rates with whether the program is cost effective is unwarranted given the statutory discretion afforded to the Commission through inclusion of the "appropriate" screen.[35] For the circumstances in which a cost-effective program is projected to yield inappropriate impacts on consumer rates, the Commission retains its discretion to deny the implementation request irrespective of the cost-effectiveness screening results.

B. Cost-Effectiveness Screening Levels

In Order No. 84569, we directed the examination of cost effectiveness to occur at the sub-portfolio level, *i.e.*, collectively for residential programs and collectively for commercial and industrial ("C&I") programs.[36] In its August 2014 filing, MEA on behalf of the EmPOWER Maryland Planning Work Group recommended that we continue with sub-portfolio testing.[37] However, BGE distinguished its position from the Work Group by noting its preference that cost-effectiveness testing occur at both the sub-portfolio level and at the program level.[38] BGE expressed concern regarding sub-portfolio testing, noting that the results may obscure projections related to individual programs that have not yet demonstrated the potential for future successful outcomes or market transformation.[39]

We have expressed repeatedly our intent to encourage additional innovation in EmPOWER program offerings,[40] and we acknowledge our earlier finding that such

[34] PUA § 7-211(f)(1).
[35] Whether a program is "appropriate" is subjective, while a program can be defined mathematically as "cost effective." MEA Comments at 9.
[36] Order No. 84569 (Dec. 22, 2011) at 16.
[37] MEA Framework Comments at 7.
[38] *Id.* at 19.
[39] *Id.*
[40] *See, e.g.* Order No. 86785 (Dec. 23, 2014) at 5; Order No. 86995 (May 21, 2015) at 13.

innovation may not always satisfy cost-effectiveness standards on a program-by-program basis.[41] Therefore, we accept the recommendation by the Work Group to continue cost-effectiveness screening at a sub-portfolio level, subject to two important clarifications. *First*, we note that prospective cost-effectiveness screening is different than retrospective cost-effectiveness evaluation; and *second*, we note that limited-income programs comprise a sub-portfolio to be considered separately during cost-effectiveness screening from the residential and C&I sub-portfolios.

As described previously, we rely heavily on a suite of EM&V best practices that yields, among other things, retrospective cost-effectiveness determinations for individual programs. These retrospective cost-effectiveness results are critical for our evaluation of recommended program modifications and for purposes of fulfilling our statutory directive to seek "the best possible results" from program implementation.[42] However, this retrospective program-by-program evaluation serves a different purpose than the prospective cost-effectiveness screening discussed here, which we find is structured appropriately to occur at the sub-portfolio level so as to encourage the development of innovative program offerings. This decision to conduct cost-effectiveness screening at the sub-portfolio level does not remove our overarching discretion to modify or discontinue an individual program at any time should it fail during implementation to demonstrate the potential for future successful outcomes or market transformation.

With respect to limited-income programs, which constitute a separate and distinct sub-portfolio of programs, we concur with the Coalition that unique treatment in cost-

[41] Order No. 84569 at 16.
[42] PUA § 7-211(i)(3).

effectiveness screening is appropriate.[43] Improving the energy efficiency of limited-income households is a critical area of focus under the EmPOWER umbrella, and simply waiving the requirement that the limited-income programs undergo cost-effectiveness screening may do our ratepayers a disservice by failing to maximize the benefits of the energy efficiency investment. However, requiring that the limited-income sub-portfolio "pass" cost-effectiveness screening may do our ratepayers a similar disservice by too greatly limiting these critical program offerings. Therefore, we accept the recommendation of the Coalition that, while cost-effectiveness screening of the limited-income sub-portfolio shall be required in the same manner as with respect to the other EmPOWER sub-portfolios, the results of the limited-income sub-portfolio screening shall serve as a point of comparison to other jurisdictions and past programmatic performance rather than as the basis for precluding certain limited-income program offerings.[44]

C. Cost-Effectiveness Assumptions

Cost-effectiveness testing is carried out by a mathematical algorithm. The EmPOWER Maryland Planning Work Group is requesting Commission direction regarding certain assumptions and inputs to the algorithm. We find that the values derived from the Avoided Cost Study performed by Exeter Associates on behalf of MEA and the Power Plant Research Project ("PPRP") for avoided energy costs were appropriately adopted by the EmPOWER Maryland Planning Work Group and reflected in the Utilities' 2015 – 2017 program cycle proposals.[45] Although the cost-effectiveness framework indicated a high level of consensus among parties on this point, a similar level

[43] Coalition Comments at 7.
[44] *Id.* at 7-10.
[45] MEA Framework Comments at 9-10.

of agreement could not be reached with respect to the demand-reduction induced price effect ("DRIPE") calculation, the selection of an appropriate discount rate, and the inclusion of NEBs.[46]

1. DRIPE

The question before us is how to appropriately account for the value and length of Energy and Capacity DRIPE in the cost-effectiveness screening process. With respect to the DRIPE calculations, the Work Group developed a greater level of consensus surrounding the valuation of Energy DRIPE than compared to Capacity DRIPE.[47] OPC did, however, note several perceived shortcomings with respect to the methodology developed by Exeter to calculate Energy DRIPE; subject to the caveat that MEA address the identified issues moving forward, OPC recommended approval of the Exeter Energy DRIPE methodology.[48]

Staff, OPC, and PE expressed varying degrees of concern with the expected value and length of the Capacity DRIPE proposed by the Exeter Avoided Cost Study.[49] Exeter concluded based on the last three reports from Synapse on the New England ISO avoided energy supply costs that prices could be influenced in the market for up to ten years.[50] However, Staff noted that a previous iteration of the Synapse report relied on by Exeter to support its ten-year assumption reflected only a four-year Capacity DRIPE benefit for calendar year 2009.[51] Staff observed that Itron calculated the 2013 cost-effectiveness values using a Capacity DRIPE benefit of only four years, and recommended that this

[46] Staff Comments at 22-23.
[47] MEA Framework Comments at 2.
[48] OPC Comments at 6, Chernick-14.
[49] Staff Comments at 22.
[50] Staff Comments at 22-23.
[51] *Id.*

same methodology be adopted here.[52] OPC took issue with the specific methodology used by Exeter to calculate Capacity DRIPE altogether, instead recommending the adoption of a different methodology advanced by Synapse/Resource Insight.[53] While acknowledging that Capacity DRIPE may have a non-zero value in some auctions, PE asserted that Capacity (and Energy) DRIPE are too uncertain and subjective to be included in the base case cost-effectiveness analysis.[54]

Throughout the proceeding we questioned the degree to which the DRIPE variables drive the cost-effectiveness screening results. As informed by our proceedings, we know that DRIPE has a lesser impact on energy efficiency program screening than on the consideration of demand response programs, and that it could potentially impact a portfolio's measure mix.[55] As such, OPC expressed concern that "inappropriate estimates of avoided costs will tend to misdirect incentive funds."[56] However, given that we retain our discretion to modify energy efficiency and demand response programs on an ongoing basis (including the appropriate incentive levels, funding, and measure mix), and given that we have a plethora of other tools to assist in these programmatic evaluations (such as forecasted versus realized participants, measures, budget, and savings), we decline to deviate from the DRIPE methodologies recommended here by Exeter and endorsed by many of the parties.[57] Furthermore, we concur with Staff that other variables unrelated to EmPOWER Maryland may influence market fluctuations in a

[52] *Id.*
[53] OPC Comments at 6.
[54] PE Comments at 14-15.
[55] Tr. 211-212 (Sunderhauf).
[56] OPC Comments at Attachment 1-7.
[57] *See* PHI Comments at 5; MEA Framework Comments at 2; MEA Framework Comments (SMECO) at 46.

shorter timeframe, and thus a four-year Capacity DRIPE is appropriate for the remainder of the 2015 – 2017 program cycle.

As with all cost-effectiveness screening assumptions discussed in this section, we anticipate that the underlying technical analysis will be updated and refreshed in conjunction with subsequent three-year program cycles.[58] Our decision here to assume a four-year DRIPE and to retain the Exeter methodology for calculating Energy and Capacity DRIPE is applicable to the remainder of the 2015 – 2017 program cycle. The DRIPE methodology may be revisited in conjunction with subsequent program cycle planning following completion of additional analyses as recommended by Staff.[59]

2. Non-Energy Benefits

Experts argue that the exclusion of non-energy benefits ("NEBs") from the cost-benefit tests "may be the most significant problem with energy efficiency program screening methods in the United States today."[60] Initially, none of the five established cost-effectiveness tests explicitly recognized the inclusion of NEBs; however, a recent study found that by 2011, 12 states indicated the inclusion of NEBs in their cost-benefit tests.[61] As the literature on NEBs has evolved, more states are moving toward the inclusion of "readily measured" NEBs in their regulatory cost-benefit tests, while other

[58] *See* Tr. at 65 – 68 (Lucas/Commissioner Speakes-Backman), discussing the need to revalue and revise assumptions every three years so as not to "be caught up in huge seismic change that is baked in for many years to come."
[59] Staff Comments at 23. So that the Commission may further evaluate the impact of DRIPE in the cost-effectiveness screening process, any future additional analyses conducted for purposes of revising the DRIPE methodology should include sensitivities that reflect results with and without energy and capacity DRIPE inputs.
[60] Woolf, T., W. Steinhurst, E. Malone, and K. Takahashi, *Energy Efficiency Cost-Effectiveness Screening*, Synapse Energy Economics, Inc., for the Regulatory Assistance Project, Inc. (2012) at 5-6.
[61] Kushler, M., S. Nowak, and P. Witte, *A National Survey of State Policies and Practices for the Evaluation of Ratepayer-Funded Energy Efficiency Programs*, American Council for an Energy-Efficient Economy (2011).

states have opted for simple adders to reflect contributions from a subset of NEB categories.[62]

As articulated by the Coalition in this proceeding, cost-effectiveness testing must be symmetrical in how it considers both costs and benefits, and thus an inclusion of all participant costs in a test requires the inclusion of all participant benefits – including NEBs.[63] We concur with this assessment, and note that our examination of additional benefits beyond energy savings is directly contemplated by the guiding statute. In order to determine whether a proposed program or service encourages and promotes the efficient use and conservation of energy, the Commission is explicitly directed by statute to consider non-energy categorical impacts on jobs and on the environment,[64] and more broadly to rely on energy efficiency as a resource to assist with the provision of affordable, reliable, and clean energy to Maryland ratepayers.[65]

In determining how to appropriately account for NEBs in our screening process, we are guided by the positions of parties such as MEA, OPC, the Coalition, Efficiency First, Delmarva, and Pepco; these parties assert generally that NEBs should be included and that cost-effectiveness screening methodologies should reflect the viewpoint of the beneficiary of the energy efficiency programs.[66] There are three classes of NEBs

[62] ML#164304: Skumatz, Lisa A. *Non-Energy Benefits / Non-Energy Impacts (NEBs/NEIs) and their Role & Values in Cost-Effectiveness Tests: State of Maryland*, NRDC (March 31, 2014), at 1.
[63] Coalition Comments at 4.
[64] *See* PUA § 7-211(i)(1)(ii)-(iv), which directs the Commission to consider the impact on rates, jobs, and the environment.
[65] PUA § 7-211(b)(2).
[66] MEA Comments at 14-15; OPC Comments at 6; Efficiency First Comments at 5-6; Coalition Comments at 4-5; and PHI Comments at 5.

depending on the selected "beneficiary" viewpoint,[67] and thus the inclusion of the NEBs we order today mirrors our selection of primary cost-effectiveness screening methodologies. Because the TRC test includes all participant costs, we concur that quantified NEBs accruing to program participants must be included in the TRC. In addition to quantified Participant NEBs, quantified Societal NEBs that represent indirect program effects and accrue to society at large also must be reflected in the SCT.[68] In keeping with our decision herein to apply unique treatment to the limited-income sub-portfolio in cost-effectiveness screening, we also direct the inclusion of certain Utility NEBs in the TRC test and the SCT as applied to the suite of limited-income programs.[69]

Given that work is ongoing in this important area of research, we find that it is appropriate at this time to adopt the business-as-usual value equivalents of the Itron quantified NEBs for the categories of air emissions, comfort, C&I O&M, and reduced customer arrearages.[70] We find that the inclusion of these specific NEBs in the TRC test and the SCT as described above will enhance the parity of cost-effectiveness screening and assist us in completing the necessary statutory inquiries. Should the parties develop additional quantifications of Participant, Utility, or Societal NEBs moving forward, or

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[67] *See Addressing Non-Energy Benefits in the Cost-Effectiveness Framework*, CPUC Energy Division Staff (2011), at 1, *available at:* http://www.cpuc.ca.gov/NR/rdonlyres/BA1A54CF-AA89-4B80-BD90-0A4D32D11238/0/AddressingNEBsFinal.pdf.

[68] Examples of "Participant NEBs" include reduced building operating costs, increased value, comfort, health, and safety. Examples of "Societal NEBs" include job creation, tax receipts growth, labor productivity, housing, value, neighborhood stability, and reduced emissions. *Id.*

[69] Examples of "Utility NEBs" include bill payment improvements and benefits from reduced customer arrearages.

[70] *See* ML#164454: *Development and Application of Select Non-Energy Benefits for the EmPOWER Maryland Energy Efficiency Programs*, Itron (Feb. 24, 2015). Itron quantified NEBs in the State using a business-as-usual value equivalent of: $0.002/kWh saved (air emissions); $34/year for each insulation or duct sealing installation (comfort: HPwES program); $27/year for each insulation or duct sealing installation (comfort: limited-income participants); and 2% of kWh savings for the life of the measure (reduced customer arrearages: limited-income program). *Id.* at 6-2. The business-as-usual value equivalent for C&I O&M NEBs varies by utility program. *Id.* at 4-11 – 4-12.

should the parties seek to revise the valuation of the NEBs directed by our Order today, the parties may present such analysis in conjunction with planning for future program cycles.

3. Discount Rate

A significant input to the cost-effectiveness screening process is the discount rate assumption. Given that each cost-effectiveness test reflects a specific stakeholder perspective in comparing the net present value of the annual costs and benefits over the life of an energy efficiency measure, the choice of discount rate depends on which test is being employed.[71] Typically, the discount rates assumed in the RIM test, the PACT, and the TRC test all correspond to the utility's weighted average cost of capital ("WACC"), while the Participant test utilizes the discount rate of an individual or business (such as the consumer lending rate).[72] The SCT generally assumes a social discount rate that reflects the benefit to society of the energy efficiency investment over the long term.[73]

Currently, the EmPOWER Maryland programs utilize the individual utility's WACC as the assumed discount rate for the TRC[74] consistent with the best practices outlined by the U.S. Environmental Protection Agency ("EPA").[75] Several parties requested a departure from this assumption, however, with the Coalition advocating for the use of a lower discount rate that takes into account the low-risk nature of energy efficiency investments for utilities.[76] MEA and Efficiency First similarly advocated for

[71] *Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers*, U.S. Environmental Protection Agency (Nov. 2008), at 4-7.
[72] *Id.* at 4-8.
[73] *Id.*
[74] Staff Comments at 21.
[75] *Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers*, U.S. Environmental Protection Agency (Nov. 2008), at 4-8.
[76] Coalition Comments at 6.

use of a lower discount rate, in particular the societal discount rate set at a nominal rate of 4.7%.[77] Staff in turn recommended using the average of the EmPOWER Utilities' WACC for all cost-effectiveness tests (except for the SCT), stating that "the average WACC equals out the various risks to the utility and participants."[78]

We concur with MEA that the assumed discount rate "must represent the balance between short-term and long-term savings from the viewpoint of the *beneficiary* of the [energy efficiency and demand response] programs."[79] Further, as stated by MEA, "[w]hen [energy efficiency] programs are appropriately viewed from a societal perspective, the only choice for discount rate is a societal rate."[80] Therefore, because we endorse the societal perspective through the SCT, we adopt the 4.7% nominal discount rate recommended by MEA for use with the SCT.[81] However, we decline to adopt the societal discount rate as the assumed input for *all* cost-effectiveness screening methodologies utilized in the EmPOWER process given our earlier stated preference to retain the integrity of the TRC test for comparison purposes. Instead, we find that the individual WACC of the Utilities should continue as the assumed discount rate for purposes of the TRC assessment, while a nominal 4.7% discount rate shall be assumed for purposes of the SCT assessment on a prospective basis. Given that our decision today renders the TRC test and the SCT as equally valid assessment tools for purposes of conducting prospective cost-effectiveness screening, we see no reason to depart from nationwide best practices regarding the discount rates assumed by the individual tests.

[77] MEA Comments at 18-19; Efficiency First Comments at 4-5.
[78] Staff Comments at 22.
[79] MEA Comments at 14.
[80] *Id.* at 15.
[81] Societal discount rates typically range from 0% to 3% in *real* terms; thus, a 4.7% *nominal* rate was endorsed by MEA. *Id.*

II. Post-2015 Goal Allocation Methodologies

In 2008, faced with dramatic rate increases due to the removal of price caps established at the time of deregulation, as well as PJM projections of rolling blackouts in the State by 2011 due to generation shortages and reliability problems, the Maryland General Assembly passed legislation to meet specific energy efficiency, conservation, and demand response targets by the end of 2015, culminating in the EmPOWER Maryland Energy Efficiency Act of 2008.[82] While the EmPOWER Maryland Act was officially adopted in 2008, the value of energy efficiency as a least-cost resource is hardly a new concept. For more than two decades – and before the enactment of the EmPOWER legislation – the Commission has been tasked with the statutory duty to "require each gas company and electric company to establish any program or service that the Commission deems appropriate and cost effective to encourage and promote the efficient use and conservation of energy."[83] The Commission's statutory directive stems from the declaration by the Maryland General Assembly that energy efficiency is among the least expensive ways to meet the growing electricity demands of the State[84] – a finding repeatedly affirmed by nationwide studies, such as a 2014 study conducted by the American Council for an Energy-Efficiency Economy ("ACEEE").[85]

[82] PUA § 7-211.
[83] In 1991, the General Assembly enacted an energy conservation measure, then codified in Article 78, §28(g) of the Maryland Annotated Code, and later re-codified as PUA § 7-211.
[84] PUA § 7-211(b)(1).
[85] This study concluded that electric utility energy efficiency programs, at an average cost of 2.8 cents per kilowatt hour ("kWh"), provide resource options ranging from one half to one third the cost of alternative options such as building new power plants. Also, compared to a natural gas commodity price of 49 cents per therm in 2013, natural gas energy efficiency programs prevailed as a least-cost option at an average cost of 35 cents per therm. *See* Maggie Molina, *The Best Value for America's Energy Dollar: A National Review of the Cost of Utility Energy Efficiency Programs*, ACEEE Report Number U1402 (March 2014), at iii.

As we reach the end of the prescribed 2015 energy efficiency and demand reduction goals, we find that enormous potential still exists throughout the State for continued cost-effective investment in energy efficiency as a least-cost resource. Moreover, curtailing energy efficiency and demand management programs would result in increased load on the PJM system, thereby heightening reliability risks including exposure to localized brownouts due to unanticipated summer and winter peak demand. The elimination of energy efficiency and demand management programs would likely also result in the need for more costly generation and transmission projects to fulfill the demand currently met in part by EmPOWER Maryland programs. For ratepayers across the State, it continues to be less costly to invest in energy efficiency than it is to pay for electricity. Across all Utilities, the lifecycle cost per kWh for the energy efficiency programs is $0.026 per kWh – significantly lower than the current cost of Standard Offer Service, which ranges from $0.062 to $0.093 per kWh.[86]

Until such time that energy efficiency is no longer a least-cost resource, or until such time that the costs of investing in energy efficiency outweigh the projected benefits, we see value in establishing energy savings goals for the Utilities on a prospective basis.[87] In this Order we establish electric energy efficiency goals and describe a framework for goal formulation that can be replicated for the other sectors. While the

[86] *The EmPOWER Maryland Energy Efficiency Act Standard Report of 2015*, MD PSC (April 2015), at 4. The cost of SOS differs between utility service territories and changes by season. Customers can access the current cost of supply service for their utility and compare residential retail electricity supplier offers by visiting the Commission's shop-and-compare web portal, *available at:* http://167.102.231.189/electricchoice/shop-and-compare/.

[87] We note, however, that the establishment of any goals does not waive or otherwise impact the Commission's discretion with respect to determining whether a program is cost effective and appropriate. As discussed in Section I: Future Cost-Effectiveness Methodologies, the Commission may decline to implement cost-effective energy efficiency programs if the impact on rates of a certain ratepayer class is found to be inappropriate. *See* PUA § 7-211(f) and (i).

record is not yet developed to the degree necessary to support the establishment of robust natural gas energy efficiency goals, or goals specific to the residential limited-income sector, we provide a timeline and guidance herein as to their future development.

A. Post-2015 Energy Efficiency and Conservation Goals

1. Electric Energy Efficiency Goals

The EmPOWER Maryland Planning Work Group utilized a common set of questions to consider the structure and nature of post-2015 energy savings goals.[88] A high level of consensus was achieved regarding several structural elements, including that goals should be established at the gross wholesale level, on a utility-wide basis, and in conjunction with the established three-year program cycle format.[89] The parties also decried generally the expression of post-2015 goals using a per capita methodology, and instead advocated for a bottom-up methodology capable of reflecting the normalization of variables such as weather.[90]

A similar consensus was not achieved, however, with respect to the expression or specificity of post-2015 electric savings targets. OPC and the Coalition proffered similar proposals, both recommending that post-2015 energy savings goals should be expressed as a percentage of retail sales and both recommending that the Commission establish a trajectory so that the Utilities achieve 2% annual incremental gross energy savings.[91] While other parties declined to offer specific proposals pending completion of the MEA-led potential study, the Coalition countered that significant evidence exists that "the

[88] OPC Comments at 4.
[89] Staff Comments at 12-14; OPC Comments at 4-5; MEA Comments at 22-24; Coalition Comments at 18; PHI Comments at 2-3; BGE Comments at 1; SMECO Comments at 1; PE Comments at 9-10.
[90] *See, e.g.* Staff Comments at 12-14.
[91] OPC Comments at 4-8; Coalition Comments at 18-22.

EmPOWER programs have not come close to saturating markets with energy efficiency," and that "Maryland is not even close to meeting the savings achievements of the Nation's leading states."[92] We agree with the Coalition and find that the continued lack of completion of the potential study can no longer be a barrier to establishing targets for EmPOWER. A potential study – the results of which are highly dependent on the selected input assumptions – is only one of several tools that can be used in this endeavor. Thus, while the parties may continue to pursue the outstanding potential study, we will look to its forthcoming results as only an informative guidepost in future discussions.

Instead, we move forward today by establishing a definitive and flexible framework for post-2015 electric goals. *First*, we accept the parties' consensus recommendation that goals should be established utility-wide[93] and at the gross wholesale level. *Second*, we concur also with the parties' consensus recommendation that a per capita goal-setting method is inappropriate moving forward,[94] and we will instead rely on a retail sales baseline that accounts for weather-normalization.[95] *Third*, we find that a continued reliance on a three-year program and planning cycle strikes an appropriate balance between accountability and flexibility. Thus, while today we establish annual incremental targets, the Utilities will ultimately be assessed against a three-year average percentage goal. *Fourth*, we accept the recommendation by OPC and the Coalition to establish a trajectory so that the Utilities ultimately achieve annual incremental gross

[92] Coalition Comments at 18.
[93] While we decline to establish separate residential and C&I goals, we note that the Utilities' performance will continue to be evaluated using the approved forecasts, which do include sector-specific breakdowns.
[94] As noted by MEA, "a top down goal introduces uncertainty" and "[i]t is important for the utilities to have measureable goals based on factors they can influence." MEA Comments at 18.
[95] The majority of states utilize an annual energy savings goal relative to retail electricity sales. Staff Comments at 8.

energy savings of 2% of their weather-normalized gross retail sales baseline.[96] In establishing this trajectory we adopt a modest ramp-up rate of 0.20% per year starting with the approved 2016 plans,[97] and escalating until such time that the utility achieves the 2% annual target. So that we may assess whether the goals established herein require the Utilities to enhance their 2017 program offerings, the Utilities are directed to file no later than September 1, 2015 a table depicting forecasted gross electric savings for the 2015 – 2017 program cycle as a percentage of the individual utility's 2013 weather-normalized gross retail sales.

Because the establishment of this new goal structure occurs midstream in the 2015 – 2017 program cycle, we recognize that from a practical perspective the full deployment of this new goal structure will occur as part of the 2018 – 2020 program cycle. Consistent with the existing statutory directive, the Utilities are directed to submit plans to the Commission no later than September 1, 2017 for this subsequent program cycle. At such time, annual incremental savings targets shall be calculated as a percentage of the individual utility's 2016 weather-normalized gross retail sales baseline. While annual incremental targets will be tracked and measured, achievement of the goal will be decided on the basis of a three-year average.

Also raised for our consideration as part of the prospective goal allocation methodology discussion were two additional topics pertaining to goal-setting and measurement. The parties sought guidance and clarification on these issues given the

[96] An illustration of the new goal structure is depicted in Appendix 1.

[97] The "ramp-up rate" refers to the rate or pace of improvement. In a recent U.S. EPA survey of existing state energy efficiency programs, the Agency identified ten states with clear energy efficiency schedules and calculated the average rate of improvement for each, finding the average rate of improvement of incremental annual savings rate to be 0.21% per year. *See Technical Support Document: GHG Abatement Measures*, U.S. Environmental Protection Agency Office of Air and Radiation (June 10, 2014), at 5-34 – 5-35.

perception that their resolution would impact the magnitude of post-2015 electric goals. Specifically, parties questioned whether it is appropriate to continue using annualized first-year energy savings to derive and measure post-2015 goals. We concur with the recommendation of OPC, Delmarva, Pepco, and PE that it is appropriate to continue with this practice. Specifically, we agree with OPC's perspective that the consistency and simplicity of deriving goals from incremental annual savings is preferable, and that routine monitoring of the Utilities' portfolios will ensure that the measure mix does not become overly dependent upon short-lived measures.[98]

Parties also questioned whether it is appropriate to continue permitting the attribution of energy savings from non-EmPOWER funded measures (*e.g.* high-efficiency transformer projects, dynamic pricing programs, etc…) toward goal progress. We concur with PE that "the State should count and take credit for savings…regardless of the cost recovery mechanism."[99] Neither MEA nor Staff objected to the continuation of this practice, subject to the reflection of the non-EmPOWER funded measure potential in the goal-setting process.[100] However, at this time we decline to make a specific adjustment to the annual incremental electric energy savings goals established herein to specifically reflect the potential of non-EmPOWER funded measures, although we will permit the Utilities to continue reporting such savings under the EmPOWER umbrella. In recognition of the concern raised by Staff and MEA, we direct Staff to analyze separately each utility's progress towards its 2016 and 2017 goal using savings

[98] OPC Comments at 4. We also note that Staff's concern regarding the need to reflect the expiration of measure savings over time is not applicable given that we have opted to establish annual incremental savings targets (rather than a cumulative savings goal). Staff Comments at 17.
[99] PE Comments at 10.
[100] MEA Comments at 24.

attributable to EmPOWER funded versus non-EmPOWER funded measures so that we may consider whether to adjust subsequent program cycle goals accordingly.

2. Natural Gas Energy Efficiency Goals

Although the current 2015 EmPOWER Maryland goals measure progress on the basis of *electricity* energy savings and demand reductions, the guiding statute states that, "[s]ubject to review and approval by the Commission, each *gas company* and electric company shall develop and implement programs and services to encourage and promote the efficient use and conservation of energy by consumers, gas companies, and electric companies."[101] (emphasis added). As the EmPOWER programs have ramped-up, some stakeholders have encouraged the formulation of separate natural gas usage reduction goals.[102] Other stakeholders have focused on the possibility of cost-effective electric savings resulting from the conversion of electric usage to direct usage of natural gas.[103] In December 2014, we directed the formation of the Natural Gas – Electric Efficiency Coordination Work Group to address in part this identified fuel conversion potential, and more broadly to develop program coordination strategies that reflect the overlap of electric and natural gas service territories and corresponding energy efficiency programs.[104]

While the Coalition and OPC both recommended the formulation of post-2015 natural gas energy savings goals as part of our February 2015 proceeding,[105] Staff and MEA cautioned that the topic required further consideration in light of the ongoing

[101] PUA § 7-211(d).
[102] ML#148544: MEA Request Proposal for EmPOWER Planning ("MEA Proposal") (July 16, 2013) at Attachment 2: 2-3.
[103] *See* Order No. 86366 (May 28, 2015) at 23.
[104] Order No. 86785 (Dec. 23, 2014) at 28.
[105] Coalition Comments at 22; OPC Comments at 8.

discussions by the Natural Gas – Electric Efficiency Coordination Work Group.[106] On April 15, 2015, we received an update on the Work Group's progress toward completing the tasks assigned to it by our December 23, 2014 order.[107] The Work Group's report indicated several recommended next steps, most prominently requesting a Commission decision as to whether natural gas utilities will be required to offer energy efficiency programs moving forward.[108]

We find, however, that such a determination is unnecessary given that the statute speaks directly to this point, stating in part that "each gas company … shall develop and implement programs and services to encourage and promote the efficient use and conservation of energy."[109] As observed by WGL, "the three largest natural gas distribution companies [WGL, BGE, and Columbia Gas] all have approved energy efficiency programs."[110] Therefore, the question before us is not whether natural gas utilities must develop and implement energy efficiency programs in the first instance, but rather whether a goal for the reduction of natural gas usage is necessary to drive further progress, innovation, and accountability. We find that development of a natural gas usage reduction goal is consistent with codified State public policy goals, and is also imperative to support an overall strategy of efficient energy usage rather than simply a shifting of demand between two fuel sources.

[106] Staff Comments at 16; MEA Comments at 25.
[107] ML#167111: *Workgroup Summary Report* (April 15, 2015) at Attachment E.
[108] *Id.* at 16.
[109] PUA § 7-211(d). Furthermore, "gas company" is defined by PUA § 1-101(k).
[110] WGL Comments at 2.

While we conclude that the formulation of a natural gas usage reduction goal for all gas companies[111] in the State is appropriate, we are not at this time prepared to establish specific targets due to the ongoing discussions occurring at the Natural Gas – Electric Efficiency Coordination Work Group. However, by this Order we establish a timeline for development of these goals and prescribe certain minimum parameters that must be observed during this process. *First*, Staff is directed to engage all affected natural gas companies in the State as part of this process. *Second*, we direct the Work Group to structure the natural gas usage reduction goals in the same manner prescribed herein for the electric energy savings goals, meaning that goals should be established: in conjunction with three-year program cycles; at the gross wholesale level; and utility-wide (rather than sector-specific). *Third*, the natural gas usage reduction goal should be formulated as a percentage of retail sales using a consistent sales baseline. While the parties may rely on external tools such as a potential study to derive this percentage, we concur with the Coalition that the completion of such a study "should not be a barrier to establishing targets for EmPOWER."[112] Instead, the parties are encouraged to look to other sources, such as achieved reductions by existing EmPOWER natural gas measures, and natural gas usage reduction goals adopted by leading states in our region.[113] Staff, on behalf of the Natural Gas – Electric Efficiency Coordination Work Group, is directed to file proposed natural gas usage reduction goals for year 2017 and the subsequent program cycle no later than February 1, 2016.

[111] "Gas company" is defined by PUA § 1-101(k).
[112] Coalition Comments at 22.
[113] As noted by the Coalition in its comments, ACEEE reported in its *2014 State Energy Efficiency Scorecard* that the ten leading states in gas energy efficiency achieved between 0.73% and 1.47% of savings as a percentage of retail sales. Coalition Comments at 22.

3. Limited-Income Energy Efficiency Goals

Improving the energy efficiency of limited-income households remains a critical area of focus for the State. In recent orders we have established a framework of accountability to increase the reach of the EmPOWER limited-income programs to as many eligible participants as possible using the allocated funding.[114] To further encourage services to this critical sector, the Coalition advocated that we establish a minimum investment target for the EmPOWER Maryland limited-income programs moving forward.[115]

While the Coalition (and all other parties) agreed that there should be no residential or C&I sector-specific goals established for the Utilities, the Coalition did recommend that we establish a separate limited-income program energy savings goal that the Maryland Department of Housing and Community Development ("DHCD"), rather than the Utilities, would be responsible for attaining.[116] We concur that the program implementer is the appropriate entity with whom responsibility for goal attainment should lie, and we also find that the establishment of a separate limited-income goal is appropriate given our decision to apply unique treatment to this sub-portfolio with respect to the cost-effectiveness screening process.

However, despite our interest in setting a post-2015 energy savings goal for our limited-income programs, the record is underdeveloped on this point, and importantly, does not contain input from the current limited-income program implementer. We therefore direct the Limited-Income Work Group to consider this issue and develop a

[114] *See, e.g.* Order No. 86785 (Dec. 23, 2014) at 21.
[115] Coalition Comments at 17.
[116] *Id.*

recommended post-2015 goal for the EmPOWER limited-income programs no later than February 1, 2016, subject to the following parameters. At a minimum, the Limited-Income Work Group should consider: the total number of customers in each service territory eligible to qualify for benefits under the Electric Universal Service Program; the historical production rate of EmPOWER-funded limited-income weatherization programs; associated bill impacts, assuming an investment per household amount equivalent to the soft cap established in Order No. 86785; and the overlap of electric and natural gas utility service territories. Until such time that we adopt a post-2015 goal specific to the limited-income programs, we will continue to evaluate program performance in light of DHCD's approved 2015 – 2017 program cycle proposal.

4. Multifamily Energy Efficiency Goals

We continue to acknowledge the importance of extending EmPOWER programs to all market segments, although we note that no party recommended the establishment of a separate post-2015 energy efficiency goal specific to the multifamily sector. We note that the absence of such a recommendation aligns with the more general consensus of the parties to establish a single utility-wide goal (rather than a separate goal for the residential and C&I sectors), and is appropriate given that the funding for multifamily initiatives is drawn from both the residential and C&I surcharges at present. To-date, the multifamily sector has been primarily addressed in the EmPOWER context through the Multifamily Energy Efficiency and Housing Affordability ("MEEHA") program implemented by DHCD. However, several of the Utilities developed in recent years

programs within their residential and C&I sub-portfolios that specifically target multifamily dwellings and master-metered units.[117]

While we decline to establish a post-2015 goal specific to the multifamily sector (just as we decline to establish a post-2015 goal specific to the residential and C&I sectors), we concur with the recommendation by Staff and others that sector progress should continue to be tracked to ensure the equitable distribution of utility resources.[118] To the extent that Staff requires the Utilities and DHCD to supplement forecasts or analyses with respect to the 2015 – 2017 program cycle in order to assess the appropriate distribution of resources to the multifamily and master-metered sector, the Utilities and DHCD are directed to do so.

B. Post-2015 Demand Reduction Goals

Since 2009, the Utilities have collectively achieved 1,743 MW of demand reduction through implementation of EmPOWER Maryland programs, serving to mitigate capacity market prices and to offset critical winter and summer peak loads. While we continue to stress the importance of such demand reduction measures, we concur with Staff's observation that several recent and ongoing developments (such as the litigation surrounding FERC Order 745 and the PJM Capacity Performance Proposal) are complicating the formulation of post-2015 demand savings targets.[119] Additionally, the Utilities have reported an increasing level of market saturation with respect to their direct load control programs in recent years, and are also grappling with customer

[117] BGE and Pepco administer a residential multifamily new construction program, while BGE, Delmarva, Pepco, and SMECO each began implementing a C&I master-metered multifamily program in the 2015 – 2017 program cycle.
[118] Staff Comments at 14.
[119] *Id.* at 14-15.

engagement issues and the interface of these traditional demand response programs with emerging initiatives such as dynamic pricing.[120]

In light of these observations, we find that the prospect of establishing post-2015 specific and robust demand reduction goals is not yet ripe for our consideration. We will, however, continue to evaluate the Utilities' achieved demand savings in light of the approved 2015 – 2017 program cycle proposals.[121] This approach provides that the Utilities will maintain demand reduction capability and continue to work towards achieving their 2016 and 2017 approved targets during this period of market transformation. The EmPOWER Maryland Planning Work Group is encouraged to continuing monitoring the developments in this arena so that a demand reduction goal could be established in conjunction with the subsequent program cycle, as appropriate.

IT IS THEREFORE, this 16th day of July, in the year Two Thousand Fifteen, by the Maryland Public Service Commission,

ORDERED: (1) That the Societal Cost Test and the Total Resource Cost Test shall be used as the assessment tools for cost-effectiveness screening on a prospective basis;

(2) That cost-effectiveness screening should occur at the sub-portfolio level subject to the guidance provided herein;

(3) That, for the 2015 – 2017 program cycle, the Energy and Capacity DRIPE methodologies proposed as part of the Exeter Avoided Cost Study shall be reflected in

[120] *Id.*
[121] *See* Order No. 86785 (Dec. 23, 2014).

the cost-effectiveness screening tools, subject to the modified assumption of a four-year Capacity DRIPE;

(4) That the Utilities' individual weighted average cost of capital shall be the assumed discount rate for purposes of the Total Resource Cost test;

(5) That a 4.7% nominal discount rate shall be assumed for purposes of the Societal Cost Test;

(6) That the Itron quantified business-as-usual valuation of non-energy comfort benefits and non-energy commercial and industrial operations and maintenance benefits shall be included in both the Total Resource Cost test and the Societal Cost Test;

(7) That the Itron quantified business-as-usual valuation of non-energy avoided air emissions benefits shall be included in the Societal Cost Test;

(8) That the Itron quantified non-energy 2% increase in benefits associated with reduced customer arrearages shall be included in the Total Resource Cost test and the Societal Cost Test with respect to the limited-income sub-portfolio;

(9) That BGE, Delmarva, Pepco, PE, and SMECO are directed to file no later than September 1, 2015 a table depicting Commission-approved forecasted gross electric savings for the 2015 – 2017 program cycle as a percentage of their respective 2013 weather-normalized gross retail sales;

(10) That post-2015 electric energy efficiency goals are established: utility-wide; at the gross wholesale level; calculated as a percentage of the individual utility's weather-normalized gross retail sales baseline; and on a trajectory to achieve an annual incremental gross energy savings of 2.0% per year using a ramp-up rate of 0.20% per year;

(11) That Staff, on behalf of the Natural Gas – Electric Efficiency Coordination Work Group, is directed to file no later than February 1, 2016 proposed natural gas usage reduction goals for year 2017 and the subsequent program cycle consistent with the guidance provided herein; and

(12) That Staff, on behalf of the Limited-Income Work Group, is directed to develop and submit a post-2015 energy savings goal for the EmPOWER Maryland limited-income programs no later than February 1, 2016.

/s/ W. Kevin Hughes

/s/ Harold D. Williams

/s/ Lawrence Brenner

/s/ Anne E. Hoskins
Commissioners[122]

[122] Commissioner Jeannette M. Mills did not participate in this decision.

Appendix 1: Post-2015 Electric Energy Efficiency Goal Structure Illustration

Hypothetical: Utility A, Utility B, and Utility C each received Commission approval for their 2015 – 2017 program cycle proposals. Translating the gross savings forecasted by the 2015 – 2017 approved plans into a percentage of their individual 2013 weather-normalized gross retail sales yields the following results depicted in Table 1.

Table 1: Forecasted Gross Savings from the Approved 2015 – 2017 Program Cycle Plans As a Percentage of 2013 Weather-Normalized Gross Retail Sales

	2015	**2016**	**2017**
Utility A	1.50%	1.50%	1.50%
Utility B	1.20%	1.25%	1.10%
Utility B	1.30%	1.35%	1.55%

Following issuance of the Commission's Order, both Utility A and Utility B need to supplement their approved calendar year 2017 plans to reflect a ramp-up rate of 0.20%. The approved plan for Utility C, however, already reflects a 0.20% ramp-up rate between calendar year 2016 and 2017, and thus Utility C does not need to take any additional action during this program cycle.

Table 2: Revised 2015 – 2017 Program Cycle Goals Annual Incremental Gross Savings as a Percentage of 2013 Weather-Normalized Gross Retail Sales

	2015	**2016**	**2017**
Utility A	1.50%	1.50%	1.70%
Utility B	1.20%	1.25%	1.45%
Utility C	1.30%	1.35%	1.55%

No later than September 1, 2017, all three utilities must file new electric energy efficiency plans for the 2018 – 2020 program cycle. The gross savings projected by the utilities' proposals must be translated into a percentage of the individual utility's 2016 weather-normalized gross retail sales baseline. Utility A, Utility B, and Utility C must propose plans that continue to ramp-up targeted annual incremental gross savings until reaching the targeted 2.0% annual incremental savings goal as a percentage of the specified retail sales baseline. While each utility's progress will be measured against the annual targets, achievement of the goal will be measured using an average of the utility's three-year program cycle annual targets.

Table 3: 2018 – 2020 Program Cycle Electric Goals Annual Incremental Gross Savings as a Percentage of 2016 Weather-Normalized Gross Retail Sales

	2018	**2019**	**2020**	**2018 - 2020 Goal**
Utility A	1.90%	2.00%	2.00%	1.97%
Utility B	1.65%	1.85%	2.00%	1.83%
Utility C	1.75%	1.95%	2.00%	1.90%